

Claim 9 now includes the limitation in clause (f) of "by including with said virtual reality environment a live video image of the performer".

The claims as amended or as newly set forth do not go beyond the original application as filed. No new matter is set forth. The additional limitations in claims 1, 8 and 9 are drawn from page 9, lines 13-18 of the specification, which provides, in part:

live video of the performers is superimposed within the graphical environment. The participants, therefore, view and interact with a novel display of both graphical data and live video data for an exciting entertainment and/or educational experience.

Additional support is found in specification portions quoted hereinbelow.

The §103 Rejections

Examiner rejects all of claims 1-9 over Freeman 5,682,196 [previously cited by Applicants] in view of Park 5,695,406 and Von Kohorn 5,916,024, contending that "Freeman discloses all the instant application with respect to the virtual reality and network applications." Also, Examiner interprets the references at considerable length, emphasizing that each is an interactive system, urging that it would be obvious to the skilled artisan to combine the Freeman with the different systems of Park and Von Kohorn to provide the apparatus of all of Applicants' apparatus claims 1 through 8 and method claim 9. Then, Examiner concludes by stating that "It is notoriously well known in the art and disclosed by Freeman that multiple persons can interact over a network utilizing a virtual reality environment.

Applicants submit respectfully that Examiner has not yet been able to appreciate the manner in which Applicants have defined over the art, and urge that Examiner consider the way in which Applicants emphasize in the application, from the outset, certain novel features.

Applicants' patent application background introduction sets forth at page 1, lines 48 ff." the present invention relates to immersive virtual reality computer systems in which participants interact with a virtual reality environment and live performers using a variety of immersion and input devices such as a head mounted display and a hand-held keypad." [Emphasis added.]

And then, Applicants' patent application then goes on to point out at page 3, lines 16, ff. that

groups of participants have been entertained by graphically enhanced live or pre-recorded performers on stage or through television, cinema or other non-immersion mediums without the enhancements of immersion devices or methods, and furthermore without immersion devices or methods in combination with voice communication from the participants to the performer and amongst and between participants.

Applicants have emphasized, in other words, the novelty of combining an immersive, interactive system in such a way that a live performer is part of the interaction. This may be carried out, as now emphasized in the claims by having at least one performer interact with at least one participant and said immersive virtual reality environment, by "including with said virtual reality environment a live or pre-recorded video image of the live performer; and then having at least one participant interact with at least one such live performer and said immersive virtual reality environment, thereby resulting in an experience which is in part controlled by the participant and said participant input device." (See claim 9 as amended.)

The combination has not been taught or suggested by the art.

Accordingly, to emphasize these features, claim 1 has now been amended to provide not only the feature, "wherein at least one live performer interacts with at least one participant and said immersive virtual reality environment;" but also now further recites the feature of:

"wherein said virtual reality environment includes a live or prerecorded video image of the performer;"

Similarly claim 8 recites the feature of "wherein at least one live performer interacts with at least one participant and said immersive virtual reality environment, and said virtual reality environment includes a live or prerecorded video image of the performer".

Thus also, claim 9 provides the following consistent amendments in clauses (f) and (g):

"(f) having at least one performer interact with at least one participant and said immersive virtual reality environment, by including with said virtual reality environment a live or pre-recorded video image of the live performer;

(g) having at least one participant interact with at least one such live performer and said immersive virtual reality environment, thereby resulting in an experience which is in part controlled by the participant and said participant input device."

Applicants have thereby emphasized features unsuggested by the art, no matter how combined. The following discussion of the key references should be considered and emphasized:

References

Freeman provides a system for interactive presentation, with personalized audio responses, for multiple viewers. In the Freeman system, the concept is to allow audio and/or video feedback to each member after the audience member reaches or points or looks at a 3D object of choice.

Applicants do not see in Freeman the concept of voice communication from *a live host to participant*, and *from participant to host*, that is participant-live host interaction even though Freeman proposes 3D video and physical interconnectivity. Also note that presentation of the objects through a user interface unit which may be helmet, and this arrangement may include earphones. The participants in Freeman may carry out dialogues with the interactive program, but not with a host (i.e., the actor), *much less a live host, presented by live or prerecorded video*. In this sense, we use the term "host" as distinguished from the computer or processor of the system. So also, there is *not* disclosed in Freeman any interaction by participants with other participants.

Consider then Park, which discloses an immersive cyber space system. Park proposed that users of the system may be seated on chairs, where they may wear a display hood which covers the user's head for production of images and sounds. The chair is supported on a base which produces vibrational inputs over a range of about 0-30 Hz. However, we see nothing in Park relative to the use of performer(s) as "host". Examiner may of course note that Park proposes use of one or more neutral hand posture controllers which may be coupled to an external computer system, and used to control various aspects of the cyber space environment, or to enter data during the cyber space experience. But Examiner is asked to observe carefully that the Park disclosure is limited to the physical arrangement for the chair, the hand controller, and the image projection mechanical features which cause the image to be visible to the user of the chair. *Park fails to disclose specific interconnectivity with a computer system. Park also fails to disclose any specific software or controlled relations thereto. Also noteworthy is that Park has no disclosure of a host, a performer,*

who is interactive in the system. So also, there is not disclosed any interaction by participants with other participants in the Park system.

Van Kohorn, in sharp comparison, relates to a coupon redemption and scoring system in which signals are transmitted from a television transmitter to a receiver at the premises of a consumer. The consumer is provided with a response unit. The response unit allows the user to select an area of interest. A key pad of the response unit is then operated by the user. Computation circuits of the response units evaluate the answers and cause hard copy printing of a coupon award. The coupon award is redeemed by the participant either by carrying it in person to a redemption center, or by mail or phone. In the case of the mail or phone or redemption station receiving that data, it is then sent back for scoring. This Von Kohorn system differs from the presently claimed system and method in concept, function and result. *Von Kohorn fails to disclose interaction between participants, and so also fails to teach interaction between a live host and the participants,* except through the redemption procedure, which can under no circumstances be instantaneous or driven by computer. That is to say, Von Kohorn requires redemption after receipt. Signals flow only from the transmitter to the individual receivers, and not in the reverse direction. Interaction never occurs.

It is respectfully submitted that Examiner's attempted combination of the teachings of Freeman, Park and Van Kohorn fails to provide the claimed inventions set forth in claims 1 through 9, for the combination would not provide the presently claimed system and method, with its features of a live host, and interaction with a video image, in the interactive environment, in the form of live or prerecorded video of such a live host. A person ordinarily skilled in the art would, without more, be unable to simply combine the features of these three patents in order to come up with the system and method claimed.

Each of Applicants' presently submitted amended claims include features not disclosed or suggested by any of the references. None discloses virtual reality environment which includes interaction with a live performer and wherein the environment incorporates a live or prerecorded video image of the live host performer.

All other references cited by Examiner have been considered, and none are believed to be more pertinent than the references applied by Examiner in the present Office action.

So also, in the accompanying Information Disclosure Statement, providing a list of references cited in a Search Report dated September 6, 2001, in a PCT application claiming priority of the provisional patent application which is the priority basis for the present utility (non-provisional) patent application, none are believed to be more pertinent than the references applied by Examiner in the present Office action.


Thus, amended independent system claim 1, and its dependencies 2 through 7, amended independent system claim 8 and amended method claim 9 are believed properly and completely patentable over the art and allowable in the application.

As formal drawings are also submitted herewith, the present application is believed to be in condition for allowance, which is solicited accordingly.

While it is believed that this response resolves all remaining issues, if Examiner believes there is any remaining issue, which could be readily resolved or other action could be taken to advance this application, such as by Examiner's amendment, it is requested that Examiner please telephone the undersigned before taking further action.

Respectfully submitted,

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Attachments:

Transmittal
Formal drawings
Information Disclosure Statement (IDS)
References Accompanying IDS
Postal Acknowledgement Card